

Message

From: Coberly, Dan [Coberly.Dan@epa.gov]
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To: Benson, William [Benson.William@epa.gov]
CC: Hines, Ronald [Hines.Ronald@epa.gov]; Cascio, Wayne [Cascio.Wayne@epa.gov]; Fontaine, Thomas [Fontaine.Thomas@epa.gov]; Russo, Bill [Russo.Bill@epa.gov]
Subject: News Forwarded: Core samples show parallel between Deepwater Horizon and 1979 spill that also used dispersant...

Core samples show parallel between Deepwater Horizon and 1979 spill that also used dispersant
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After the offshore rig sank into the sea, the oil flowed for months before anyone could stop it. Millions of gallons of crude tainted the Gulf of Mexico. To try to dissipate it before it reached shore, the rig's owner sprayed an unprecedented amount of chemical dispersant on the slick.

- That's what happened with the Deepwater Horizon disaster that began five years ago today off the coast of Louisiana. That spill of BP oil has continued causing ecological damage such as a die-off of dolphins and lesions on redfish, among other marine species.
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But that same scenario also happened with an earlier offshore disaster: the explosion and sinking of the Ixtoc 1 rig off the coast of Mexico in 1979.

Now scientists from a Florida-based scientific consortium have found a disturbing parallel between the two disasters. In both cases, the use of a dispersant on the gushing oil left a thick layer of slime lying on the ocean bottom, where it disrupted normal marine life in the gulf.

"What happened in the northern gulf seems to be exactly what happened in the southern gulf," said David Hollander, a University of South Florida chemical oceanographer who has been studying the Deepwater Horizon spill since it began in 2010.

In both cases, he said, "a substantial amount of oil" remained on the gulf floor for years after the spill. With Deepwater Horizon, that amount is between 4 and 10 percent of the oil spilled, he said.

That apparently happened because of the use of a dispersant, which blocks oil droplets from joining together into big slicks.

With the approval of the Environmental Protection Agency, BP sprayed more of the dispersant, known as Corexit, than had ever been used. BP also used it deeper by spraying it directly at the oil erupting from the broken pipe 5,000 feet below the gulf's surface.

All told, it used 1.84 million gallons of Corexit — just barely breaking the prior record, held by Ixtoc, and creating a controversy that continues today.

"The decision to use dispersants was made based on decades of research and real-world experience, and the best available science and data," BP vice president Geoff Morrell said in a statement emailed to the *Tampa Bay Times*. "Dispersants played an important role in reducing the amount of oil that reached the Gulf's beaches and marshes and limiting damage to coastal habitat and marine life."

Ideally all of the dispersed droplets would be consumed by oil-eating bacteria that live throughout the gulf. Instead, plumes of the nearly invisible droplets floated through the gulf's deep canyons, spreading the impact of the disaster through some of the most important areas for marine life.

A study released by Temple University researchers this month found that BP oil alone wasn't as damaging to the gulf's deep corals as that same oil mixed with Corexit was.

Yet the offshore oil industry still swears by the stuff.

In a news conference this month, oil industry representatives touted new technology for preventing another offshore rig disaster from happening. When a reporter asked whether they would still use Corexit on another spill, the reply was, "It's allowed under the law."

That's because the EPA's studies show Corexit is no more toxic than any of the alternatives.

As for the Temple study and another from the University of Alabama at Birmingham that found Corexit caused abnormalities in animals and humans, BP's Morrell says findings produced in a lab "are not comparable to conditions and exposures that existed in the gulf."

But now the consortium — a partnership of 13 institutions that includes USF's College of Marine Sciences, Eckerd College and Mote Marine Laboratory in Sarasota — is going back to Ixtoc and Deepwater Horizon sites and taking samples to find parallels between the two.

"The comparison of Ixtoc I and Deepwater Horizon blowouts may give sound knowledge about the evolution of big oil spills," said Alfredo Gracia of the Universidad Nacional Autónoma de México, who is working with the Americans on the study.

They have already found that core samples dug up from the ocean floor after the 1979 spill greatly resemble ones from the vicinity of the Deepwater Horizon. The similarity is the thick, dark layer of oil and dispersant that blocked any of the small creatures living on the ocean floor from penetrating it or stirring it up, the way they would normally.

Three years after Deepwater Horizon, USF scientists found that the oil on the gulf floor had killed millions of amoeba-like creatures that form the basis of the gulf's aquatic food chain. Did that also happen during Ixtoc? No one knows for sure — yet.

"It was considered that oil lost during the Ixtoc blowout ... impacted severely the phytoplankton and zooplankton communities mainly nearby," Gracia said.

But when the Ixtoc spill at last went away, pushed off by heavy coastal rains, so did research grants. So while the shrimp fishery collapsed, that might have been because of the oil or it might have been because of overfishing, Gracia said.

Thus, for scientists like him, the \$20 million effort by the consortium to compare the two spills is a chance, at last, to solve that old mystery along with the newer one. Link: <http://www.tampabay.com/news/environment/water/core-samples-show-parallel-between-deepwater-horizon-and-1979-spill-that/2226183>